

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Modernizing the E-rate Program for Schools)	WC Docket No. 13-184
and Libraries)	DA 14-308

Reply Comments of Affiniti LLC

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Reply Comments of Affiniti LLC

Affiniti LLC (“Affiniti”) hereby submits these reply comments in response to the Public Notice¹ issued by the Wireline Competition Bureau (“Bureau”) in the above-captioned proceeding.

I. Summary

These reply comments outline a series of changes to the Commission’s schools and libraries universal service support mechanism (“E-rate”) that Affiniti believes will improve the benefits of the program to students and library patrons. Specifically, Affiniti believes that the Commission should:

- Direct all available resources to catalyze the transition to broadband IP networks, with an emphasis on facilities operated on an open access basis;
- Eliminate the distinction between “Priority 1” and “Priority 2” services, in favor of a “whole network” approach;
- Prioritize funding necessary for E-rate support recipients using metrics that reflect the school’s information technology needs, such as the recipient’s ability to utilize VOIP services, rather than metrics that rely on socioeconomic status or institution size;
- Expand E-rate support for location-independent services to reach students and library patrons wherever they are, beyond the school or library walls; and
- Fund demonstration projects to connect schools and libraries to Broadband Technology Opportunities Program (“BTOP”) middle mile networks.

¹ *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184, Public Notice, “Wireline Competition Bureau Seeks Focused Comment on E-Rate Modernization Issues,” DA 14-308 (rel. Mar. 6, 2014) (“Public Notice”).

Affiniti believes that these reforms, taken together, will direct funding to the areas of greatest needs, speed the transition to IP-based services, and leverage the nation's existing BTOP investment in rural broadband networks.

II. Background

Affiniti provides Wide Area Networking ("WAN"), Voice over IP Telephony (VoIP), Dedicated Internet Access and Managed Services to public and private customers in 19 states. Affiniti delivers advanced broadband solutions to nearly one million students at over 1,000 education sites, as well as 45 healthcare institutions, and other Community Anchor Institutions ("CAIs"). It manages BTOP networks constructed with grant awards in Florida and Colorado, and continues to expand. Today, its fiber and microwave networks span over 50,000 square miles concentrated in seven states. As a result, Affiniti has a detailed understanding of the needs of schools and libraries participating in E-rate, and welcomes the Commission's efforts to modernize the E-rate mechanism to meet those needs.

III. Discussion

A. The Commission Should Commit All Available Resources to Infrastructure Deployment to Catalyze the Transition to Broadband IP Networks

Affiniti enthusiastically supports the Commission's focus on using E-rate funding to improve access to high-capacity broadband services for our nation's schools and libraries.² Like other CAIs, schools and libraries face rapidly growing needs for affordable broadband services and the IT infrastructure necessary to use those services efficiently and effectively. Particularly in rural America, two-way interactive videoconferencing can bring advanced and specialized classes within reach of students who otherwise would go without, whether because of a lack of

² Public Notice at ¶¶ 6-10, 24-25.

access to suitably qualified teachers or insufficient student demand. Broadband also facilitates student access to up-to-date research and discoveries, as well as multimedia educational content, ensuring that learning is based on current and comprehensive information resources.

To function properly and safely, these broadband services require a host of other IT infrastructure and support systems. Thus, Affiniti supports the Commission's proposal to make any "technology that improves the efficiency of the broadband networks" eligible for E-rate support.³ While Affiniti agrees that caching servers, modern firewalls, and up-to-date content filtering software should be eligible⁴ E-rate should also support tools for maintaining network security and managing information, such as redundant services, hosting, cloud services, and other content management systems.

With respect to network infrastructure to create broadband connections between schools and libraries and the Internet, a lack of necessary broadband infrastructure disproportionately limits the availability and affordability of adequate broadband services in rural America. While affordability of service is critically important, infrastructure deployment – fiber or other high capacity connections to existing rings, WAN connections among campus buildings, and internal connections to classrooms – remains the "big ticket" item limiting the transition to 21st century IP networks.

Thus, Affiniti supports the Bureau's proposals to expand funding for new deployment of infrastructure to support broadband services, particularly for those providers that commit to adhering to "open access" policies, such as those that govern the middle mile networks built with

³ Public Notice at ¶ 12.

⁴ *Id.*

federal BTOP grant award funds. Investments in open access lateral connections to schools and libraries will create at least two significant benefits. *First*, open access lateral connections to schools and libraries will facilitate greater competition for E-rate supported services in the future. Open access commitments assure that a multiplicity of Internet service providers could utilize the lateral on a nondiscriminatory basis in bidding to provide services supported by E-rate to the school or library in the future.

True open access should include interconnection (*i.e.*, peering), as well as non-discriminatory pricing for transport. For example, Sections 251 and 252 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 251-252 impose certain nondiscrimination, interconnection, and access obligations on subject incumbent local exchange carriers (“LECs”). In addition, networks built with BTOP grant award funds are uniquely and uniformly subject to the nondiscrimination and interconnection obligations of that program, including, among other things, the obligation for operators to offer interconnection, collocation, and “wholesale broadband services at rates and terms that are reasonable and nondiscriminatory.”⁵ By providing additional support for open access laterals, the Commission will therefore be laying the best groundwork for future competitive market savings to the E-rate program.

⁵ See National Telecommunications and Information Administration, “Fact Sheet, Broadband Technology Opportunities Program, Nondiscrimination and Interconnection Obligations,” (Nov. 10, 2010), at 2 (attached hereto as **Exhibit A**) (available at: http://www2.ntia.doc.gov/files/Interconnection_Nondiscrimination_11_10_10_FINAL.pdf). While the Broadband Initiatives Program (“BIP”) was also created by the American Recovery and Reinvestment Act, Pub. L. 111-5, 123 Stat. 115 (2009), the Rural Utilities Service (“RUS”) focused its BIP awards on last mile projects, instead of middle mile networks, and RUS has never articulated specific enforcement priorities associated with the nondiscrimination and interconnection obligations that apply to BIP awards.

In contrast, today, many cable companies, competitive local exchange carriers (“CLECs”), and other competitive providers have received significant E-rate funding for nonrecurring construction costs to build purpose-built private wide area network (“WAN”) facilities with no obligations to provide access to those facilities to competing providers. Thus, today, these E-rate investments ensure the initial provider a permanent structural advantage in bidding for subsequent E-rate services to those schools and libraries, creating the risk that the mechanism in the future will be burdened by supporting non-competitive, above-market rates.

Second, open access laterals will catalyze additional investments to expand the deployment of broadband outward from the school or library to nearby CAIs, homes, and businesses. Because a fiber lateral to the school or library beneficiary of E-rate support is likely to have the capacity to serve a significant number of additional broadband customers, a commitment from the provider to permit open access to the lateral to other competing providers will ensure that those broadband providers that are best able to serve customers in the surrounding area are able to secure the middle mile transport capacity required to do so.

Finally, given the “dramatically lower recurring costs over time” that accompany new broadband deployment,⁶ Affiniti believes that the Commission should increase the discount for infrastructure deployment, particularly for E-rate recipients in rural areas, where the distance from the school or library to the nearest fiber interconnection point is likely to be greatest, the cost of such deployment is therefore likely to be highest, and schools and libraries are likely to have fewer available funds to use for this purpose.

⁶ Public Notice at ¶ 27.

For example, the E-rate program could allow for up-front non-recurring reimbursements for new construction above \$500,000 either (1) if the new network infrastructure will be operated on an open access basis and connects to an open access network; or (2) if it provides a minimum for three open access points of presence within the community where the school or library is located. This would provide incentives for the winning provider to build infrastructure designed to support broadband throughout the rural or underserved community, and open the network for a broad range of service providers in order to rapidly extend the benefits of broadband beyond the school or library.

In focusing on infrastructure in this manner, the Commission should embrace the increasing convergence among its universal service mechanisms on funding for broadband infrastructure as the natural and intended result of its policy choices. Indeed, in light of the National Broadband Plan's clarion call that, "[b]roadband is the great infrastructure challenge of the early 21st century,"⁷ the Commission has appropriately pursued a coordinated approach across its universal service mechanisms to stimulate the deployment of broadband to each of the particular constituencies the respective mechanisms target. The infrastructure focus will also maximize service providers' and E-rate support beneficiaries' opportunities to leverage state and local resources, such as the recently proposed New York State "Smart Schools" bond initiative.⁸

⁷ Federal Communications Commission, Omnibus Broadband Initiative, *Connecting America: The National Broadband Plan*, (2010), at 19 ("National Broadband Plan").

⁸ Press Release, *Governor Cuomo Announces Members of the Smart Schools Commission* (Rel. Apr. 17, 2014), available at <http://www.governor.ny.gov/press/04172014-smart-schools-commission>).

B. The Commission Should Eliminate the Funding Distinction between “Priority 1” and “Priority 2” Services

The Bureau seeks comment on a variety of ways to use an additional \$2 billion in E-rate funding that the Commission proposes to make available over the next two years, including various options for funding “Priority 1”⁹ and “Priority 2” needs.¹⁰ Affiniti strongly supports the availability of additional E-rate funding. Demand for E-rate funds routinely far outpaces the availability of funds and, compounding this problem, inflation since the program’s inception has eroded the buying power of the capped fund. In fact, in 2010, the Commission’s National Broadband Plan recommended indexing the fund for inflation, observing that, “the current program’s annual spending has fallen by about \$650 million in inflation-adjusted dollars since the program began.”¹¹ While the Commission began indexing the cap for inflation later that year,¹² the lost purchasing power suffered before that time has never been recaptured. As history shows, the needs of schools and libraries for E-rate funds has not lessened over time nor, with increasing needs for bandwidth, is it expected to do so.

At any funding level, however, the artificial dichotomy between “Priority 1” and “Priority 2” funding hinders the emergence and efficient use of affordable IP broadband services throughout the community via primary and secondary education and library channels. As IP networks and broadband services have proliferated over the past two decades, the needs of E-rate beneficiaries have evolved in ways that no longer lend themselves to neatly compartmentalized “Priority 1” and “Priority 2” categories.

⁹ Public Notice at ¶¶ 24-33.

¹⁰ Public Notice at ¶¶ 8-23.

¹¹ National Broadband Plan at 256 (recommendation 11.18).

¹² Sixth Report and Order at ¶ 36.

Rather, Affiniti believes that the Commission should reform E-rate to recognize that today's services depend on the capabilities of the "whole network" – both the facilities that deliver services to the school or library, and the internal connections that distribute the services within the building – to function.¹³ A lack of modern IP internal connections can frustrate a school or library's adoption of broadband services as surely as a lack of access to high-capacity broadband at the school's front door. Broadband services do their work in the classroom, not the school's Minimum Point of Entry.¹⁴

C. Support Should Reflect Equitable and Efficient Distribution

1. The Commission Should Prioritize Funding of Infrastructure Necessary to Accelerate the Transition to VOIP

Affiniti supports the Commission's proposal to transition E-rate support from circuit-switched voice telephony to VOIP services.¹⁵ VOIP is more efficient and frequently more cost effective than circuit-switched telephony, and can offer additional features. As voice communications become just another of the packet streams traveling over broadband connections, support directed to standalone circuit switched voice services increasingly represent funds that could be used to greater effect in other ways. But, of course, VOIP – and the delivery of managed services that schools and libraries increasingly demand – require sufficient high-

¹³ See Massachusetts Broadband Initiative Reply Comments, WC Docket No. 13-184 (filed Oct. 17, 2013), at 4-5.

¹⁴ See The Quilt Comments, WC Docket No. 13-184 (filed Apr. 7, 2014), at 3 ("[B]andwidth is only as good as its weakest link. If that weakest link is inside the school or library building, then the chokepoint in the network begins and ends with each individual student and library patron, and there is no way to engineer around that limitation. Therefore, we urge the FCC to bring Internet connectivity into the classroom and library rooms where students, educators, and library patrons need it most.")

¹⁵ Public Notice at ¶¶ 43-44.

capacity customer and provider broadband infrastructure to function, and many schools and libraries lack access to one or both of these prerequisites.¹⁶

As a result, to implement the “whole network” approach, Affiniti believes that the Commission should embrace an E-rate funding model that prioritizes funding to E-rate beneficiaries that require infrastructure upgrades –whether between the network and the applicant’s premises, within the recipient’s building, or between campus locations – to support the use of high-capacity broadband services necessary to migrate to VOIP. In doing so, the Commission should recognize VOIP as a proxy for the overall capabilities of the E-rate beneficiary’s broadband service and internal connections, both of which must work in tandem to support use of VOIP services.¹⁷

Unlike both today’s use of school lunch program participation to set E-rate discount levels, and the proposed “cost-per-student-served” metrics,¹⁸ the use of VOIP capability to prioritize E-rate funding best targets the schools and libraries with the greatest IT needs. School lunch program participation, in contrast, targets funding on the schools and libraries in the most socioeconomically disadvantaged communities, without giving any direct consideration to their

¹⁶ ITTA Comments, WC Docket No. 13-184 (filed Apr. 7, 2014) at 7 (“Should the Commission nevertheless determine to reduce or eliminate support for voice services, it must ensure that the transition is gradual to allow schools and libraries ample time to make appropriate adjustments to their technology plans and budgets Under no circumstances, however, should the Commission eliminate priority one support for traditional voice services for those schools and libraries in remote rural areas, such as Tribal lands, where POTS is the primary means for communicating with students, parents, and members of the community due to lack of access to high-capacity broadband.”).

¹⁷ See USTelecom Comments, WC Docket No. 13-184 (filed Apr. 7, 2014) at 5 (E-rate support should target schools and libraries that “do not have adequate (or any) broadband facilities under the existing system.”).

¹⁸ Public Notice at ¶ 32.

actual level of access to high-capacity broadband, nor the capabilities of the internal connections with which it is used. Over time, this metric leads to over-subsidization of schools that have adequate broadband services at the expense of those schools that remain underserved.

“Cost-per-student-served” metrics would come nearer to the mark, but the high proportion of fixed costs associated with broadband services and internal connections means that such a metric would systematically disadvantage smaller schools and libraries, which would necessarily be required to spread the cost of upgrades across a smaller group of users.

Furthermore, those small schools and libraries are disproportionately likely to be located in rural areas, precisely where the need for funding is greatest.¹⁹

2. The Commission Should Create Rules that Facilitate Consortium Purchasing and Minimize Administrative Burdens

Particularly for broadband infrastructure, such as fiber laterals to school and library buildings, consortium purchasing creates significant construction cost efficiencies. Providers that bid to serve a consortium of local schools and libraries can plan routes for fiber laterals from existing middle mile backbones that minimize the necessary construction, which will reduce the total cost of facilities compared to the cost of building individual laterals to each school or library individually. Commission rules should encourage schools and libraries to form consortia that capture these efficiencies.

As one possible model, the Commission should consider whether the consortium formation and application processes recently adopted in the rules governing Health Care Connect

¹⁹ Fatbeam, LLC Comments, WC Docket No. 13-184 (filed. Apr. 7, 2014) at 1 (“Urban area schools and libraries have many options for high-speed bandwidth whereas rural schools and libraries often have less or no access to high-speed bandwidth. High-speed broadband deployment in rural areas should be a focus of E-rate funds.”).

funding could be adapted to E-rate.²⁰ Those procedures have been well received by the applicant community and are already in place. One of the best ways to minimize the administrative burden on applicants, service providers, and Commission and USAC staff alike would be to maintain procedures that are as similar as possible across the various universal service mechanisms, particularly the E-rate and rural health care mechanisms.

Further, the Commission should extend the concept of “evergreen” contracts from the rural health care mechanism into E-rate. Under the “evergreen” contract approach, once a service provider and applicant have signed a multi-year contract that meets certain program requirements, the USAC staff may certify it as an evergreen contract. In subsequent years during the life of the contract, the parties are subject to greatly streamlined procedures for continuing to receive supported services during the life of the contract. As USAC explains, “[w]ith an evergreen contract, the health care provider (HCP) does not need to file the FCC Form 465 or participate in competitive bidding for the life of the contract (or until the contract is modified).”²¹

D. E-rate Services Should Benefit the Community Beyond the School or Library Walls

In seeking comment on the scope of services to be funded, both under Priority 1 and Priority 2,²² Affiniti believes that the Bureau has not given sufficient attention to the important issues, particularly in rural areas, of expanding the benefits of E-rate beyond the physical school and library premises. Tying support to a single geographic location makes little sense in an age when

²⁰ *Rural Health Care Support Mechanism*, CC Docket No. 02-60, Report and Order, FCC 12-150, 27 FCC Rcd 16678, at ¶ 197 *et seq.*

²¹ USAC, “Evergreen Contracts, *available at*: <http://www.usac.org/rhc/telecommunications/health-care-providers/evergreen-contracts.aspx>.

²² Public Notice at ¶¶ 11-12, 26-29.

students and communities are increasingly mobile.²³ As students and communities embrace learning opportunities worldwide, the Commission should expand its support for location-independent services to reach students and library patrons wherever they are, beyond the school or library walls.

In the past, the Commission has taken commendable action to expand the utility and utilization of services supported by E-rate throughout the community the applicant serves. For example, based on its experience in granting a series of waivers to permit limited use of E-rate services by members of the surrounding community that otherwise would lack affordable Internet access services,²⁴ the Commission later modified its rules to permit community use of E-rate services when school is not in session.²⁵ As the Commission explained:

²³ See Letter from Edyael Casaperalta, Rural Broadband Policy Group Coordinator, Center for Rural Strategies, WC Docket No. 13-184 (filed Apr. 8, 2014), at 1 (“[S]tudents described their experiences accessing wireless and broadband services in their towns, and discussed why these services matter to their educational and career goals. They said that they primarily access the Internet via cell phone, even when searching for employment opportunities or for homework. Ms. Cussins, who is currently working at a hospital and plans to attend radiology school, talked about having to drive 6 miles to the closest library to use the computers, access Internet, and complete her homework. She said that the restrictive library hours (from 10 a.m. to 2 p.m.) and high demand for the library’s computers, which are available on a first-come first-serve basis, represent additional challenges to her studies.”)

²⁴ See, e.g., *Schools and Libraries Universal Service Support Mechanism*, CC Docket No. 02-6, Order and Notice of Proposed Rulemaking, FCC 10-33, 25 FCC Rcd 1740 (2010) (“*E-rate Community Use Order and NPRM*”); *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Order, FCC 01-350, 16 FCC Rcd 21511 (2001), at ¶ 6 (permitting “members of rural remote communities in Alaska, where there is no local or toll-free dial-up Internet access, to use excess service obtained through the universal service mechanism for schools and libraries when the services are not in use by the schools and libraries for educational purposes”).

²⁵ *Schools and Libraries Universal Service Support Mechanism*, CC Docket No. 02-6, Sixth Report and Order, FCC 10-175, 25 FCC Rcd 18762 (2010), at ¶¶ 22-27 (“*Sixth Report and Order*”).

[T]here are many times when schools are out of session – evenings, weekends, school holidays, and summer breaks, for example – and we conclude that it is in the public interest to allow greater use of government-supported services and facilities during those times, particularly because that enhanced access comes at no additional cost to the E-rate program. Moreover, we find that the revised rules are consistent with the overarching goals of universal service to promote access to telecommunications and information services, and that no provision of the Communications Act prohibits this use of E-rate supported services.²⁶

This expanded access has greatly benefitted communities, particularly in rural areas, where broadband services, even today, may be costly or unavailable.

Having expanded community access to E-rate services at school and library locations, it is now time for the Commission to take the complementary step of making E-rate services available to students and library patrons throughout the community. The Commission should thus expand E-rate support for services that enhance education wherever it takes place, rather than reinforcing outdated paradigms that education is limited to the classroom or library premises. The Commission has already gained experience with the “E-rate Deployed Ubiquitously” or “Learning-on-the-Go” pilot program to fund off-campus wireless telecommunications and Internet access services, without cost allocation, for a limited number of selected applicants.²⁷ In doing so, the Commission recognized that, “advances in technology have enabled students to continue to learn well after the school bell rings, including from their homes or other locations, for example, youth centers”²⁸ and cited the following specific benefits that E-rate services can provide within the larger school or library community:

- Enabling innovation in learning outside the boundaries of the school building and the traditional school day;

²⁶ *Id.* at ¶ 23.

²⁷ *Sixth Report and Order* at ¶ 46.

²⁸ *Id.* at ¶ 42.

- Enabling libraries to innovate with new models of delivering service to library patrons;
- Facilitating the potential for meaningful gains in student achievement that new devices and applications may deliver; and
- Providing significant utility in devices that allow remote access to the Internet for library patrons.²⁹

Not only would such access permit continued use of E-rate services for learning outside the school or library walls, it would also enable use of those services by students or patrons who cannot physically reach the school or library, whether because of a disability, illness, poor weather conditions, or other impediment.

E. The Commission Should Fund Demonstration Projects to Connect Schools and Libraries to BTOP/BIP Middle Mile Networks

Affiniti agrees that demonstration projects are an important way in which the Commission should gain experience with the types of innovative ways in which providers and E-rate beneficiaries can extract maximum value from E-rate support dollars.³⁰ Among these, the Commission should leverage the Nation's important investment in rural middle mile infrastructure created under BTOP by funding demonstration projects that create additional lateral connections from BTOP middle mile networks to nearby schools and libraries. While BTOP grant awards funded certain lateral connections to CAIs, it was focused on middle mile infrastructure, and funding constraints or other program restrictions left some CAIs in the funded service areas lacking connections to a nearby BTOP middle mile backbone. The benefits of completing additional lateral connections cannot be overstated.

²⁹ *Id.* at ¶ 46.

³⁰ Public Notice at ¶¶ 55-61.

The Commission should provide E-rate support for construction of similar laterals to BTOP middle mile networks, both through the infrastructure support mechanism described above, and through demonstration projects specifically focused on connections to BTOP middle mile networks, as described above.

IV. Conclusion

For the foregoing reasons, Affiniti hereby requests that the Commission modernize the E-rate support mechanism to (1) provide greater support for broadband infrastructure, with a particular focus on facilities that will be operated on an open access basis; (2) facilitate more efficient and effective use of E-rate services by eliminating the distinction between “Priority 1” and “Priority 2” services in favor of a “whole network” approach; (3) promote equitable and efficient distribution of E-rate funds by relying on metrics that directly measure the IT needs of individual schools and libraries and encourage the formation of buying consortia; (4) expand the use of E-rate services beyond the school or library walls; and (5) create demonstration projects that enhance the benefits of BTOP middle mile networks by funding the construction of lateral connections to schools and libraries that remain unserved within their service areas.

Respectfully submitted,

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Exhibit A

National Telecommunications and Information Administration,
“Fact Sheet, Broadband Technology Opportunities Program, Nondiscrimination and
Interconnection Obligations,” (Nov. 10, 2010)



FACT SHEET
Broadband Technology Opportunities Program
Nondiscrimination and Interconnection Obligations

Overview

One of the fundamental principles of the Broadband Technology Opportunities Program (BTOP) is open access. This fact sheet provides initial guidance to help infrastructure grant recipients comply with the nondiscrimination and interconnection requirements for their awards. NTIA believes that the relationships between recipients and their wholesale and retail customers should be driven by market forces. NTIA's primary role is to ensure that recipients comply with the terms and conditions of their grant awards. NTIA takes seriously grantees' demonstrated commitments and ability to offer open access and will closely monitor grantees' performance in this area.

Applicability of Requirements to Subrecipients and Other Parties

Importantly, BTOP's nondiscrimination and interconnection requirements apply to grant recipients and subrecipients. In certain cases, these obligations also may apply to contractors, subcontractors, purchasers of indefeasible rights of use (IRUs)/dark fiber, or other parties engaged to deploy or operate the network facilities that are part of the project. NTIA expects recipients to ensure that all relevant entities are familiar with and in compliance with the nondiscrimination and interconnection requirements. As discussed below, these requirements do not apply to existing network facilities or equipment of recipients, subrecipients, and other parties.

Interconnection

A. Notice of Funding Availability (NOFA) Requirements

- **Interconnection:** Recipients shall provide access to BTOP-funded facilities at any technically feasible point along the network (without exceeding current or reasonably anticipated capacity limitations). This duty includes, at a minimum, the physical interconnection of the recipient's facilities to a requesting party's facilities for the exchange of traffic. In addition, recipients shall connect to the public Internet directly or indirectly and provide requesting parties with an ability to connect to the Internet. Rates and terms for interconnection shall be reasonable and nondiscriminatory.
- **Negotiate in Good Faith:** Recipients shall negotiate in good faith with all requesting parties (i.e., public, private, non-profit, or other parties) making a bona fide request for interconnection or wholesale services.

B. Guidance

1. Interconnection and Collocation

- a. **Interconnection:** BTOP grantees should be prepared to: (a) wholesale a direct connection that it has built to the customer (i.e., loop or lateral); and (b) provide transport services to a last mile provider that is serving the customer (e.g., backhaul, Internet access). Recipients should make all reasonable efforts to allow all requesting parties to interconnect with their facilities regardless of the business model or purpose of the requestor. The requirement to offer interconnection at any technically feasible point along the network includes all points of interconnection set forth in a recipient's approved application, including splice points and mid-span.





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- b. Collocation:** Recipients should allow collocation by interconnecting parties, on a first-come, first-served basis, in any equipment or facilities funded by BTOP, where and when possible. Recipients should expect customers to request a variety of collocation services, including secured space separated from the owner's equipment, 24-hour access, escorted or unescorted access, and AC and/or DC.
- c. Rates and Terms:** Rates and terms for interconnection shall be reasonable and nondiscriminatory. If a party requests to interconnect with BTOP-funded facilities at a location where no point of interconnection currently exists, the requesting party should bear any reasonable cost to improve the facilities to allow for interconnection. If a party requests to collocate with a recipient where BTOP funds have been used to acquire, expand, or upgrade collocation space, the recipient should allow the requesting party to collocate at reasonable and nondiscriminatory rates.

2. Access to Wholesale Broadband Services and Dark Fiber

- a. Rates and Terms:** Recipients should offer wholesale broadband services at rates and terms that are reasonable and nondiscriminatory. Many recipients set forth wholesale pricing in their applications and, as such, those rates will be presumed reasonable and nondiscriminatory.
- b. Types of Service:** Customers will expect certain wholesale services to be provided including, but not limited to, local transmission services, transport, and dedicated Internet access services.
- c. Quality of Service:** Customers will expect that there will be certain quality of service levels guaranteed as part of their wholesale agreements. Agreements with requesting parties should contain service level agreements, service level guarantees, and standards, including service guarantees and standards related to jitter, latency, delivery ratio, and service availability.
- d. Provisioning and Installation:** Customers will expect that agreements for wholesale services will contain provisioning and installation intervals and that these intervals will be reasonable and nondiscriminatory. Customers will expect provisioning and installation timeframes that are consistent with industry standards and practice, for example, 30 days for the provisioning and installation of on-net circuits.
- e. Repair and Maintenance:** Customers will expect that agreements for wholesale services will include provisions for repair and maintenance, as well as service outage credits. Customers will expect repair and maintenance timeframes that are consistent with industry standards and practice and that recipients have established Mean Times to Repair for all offered services, which should be based on the nature of the service issue (i.e., outage, noise on the line, etc.).
- f. Dark Fiber:** To the extent that a recipient's business plan involves offering dark fiber, the recipient should consider making available various information to requesting parties including, but not limited to, route maps, interconnection points, splice points, and type of fiber.

3. Access to Information

- a. Routes:** Recipients should provide up-to-date information to parties making bona fide requests regarding the location of grant-funded network routes, including routes containing dark fiber. For example, the information could be a high-level map of the BTOP network that identifies city pairs connected to the network.
- b. Points of Interconnection (POIs):** Recipients should provide up-to-date information to parties making bona fide requests regarding the location of the POIs associated with the grant-funded facilities and whether capacity exists to permit interconnection. Regarding location, the information should identify the census block within which the POI resides and the related community, town, or





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city and Stats of the POI. Recipients may require execution of a non-disclosure agreement prior to releasing this information.

- c. **Requests for Service:** Recipients should maintain a standardized, easily accessible method for parties to make inquiries and request service. Recipients should establish a standard policy for responding to requests within a reasonable period of time, for example, 10 days. In addition, the NOFAs require that recipients shall allow for a reasonable time for negotiation, not to exceed 90 days, and adhere to the dispute resolution process set forth in the NOFAs.

4. Access to Agreements

- a. **Standard Terms and Conditions:** Recipients should maintain a publicly available (i.e., displayed on a website) up-to-date list of standard terms and conditions provided to all network users, including partners and sub-recipients. Maintaining a publicly available list of standard terms and conditions does not alleviate a recipient of its responsibility to enter into commercial negotiations with a customer upon a bona fide request.
- b. **Disclosure of Agreements:** Copies of all service agreements should be made available to NTIA upon request.

Nondiscrimination

- **Internet Policy Statement:** Recipients shall adhere to the following principles that were set forth in the Federal Communications Commission (FCC) Internet Policy Statement (FCC 05-151, adopted August 5, 2005) or any subsequent ruling or statement:
 1. Consumers are entitled to access the lawful Internet content of their choice.
 2. Consumers are entitled to run applications and services of their choice, subject to the needs of law enforcement.
 3. Consumers are entitled to connect their choice of legal devices that do not harm the network.
 4. Consumers are entitled to competition among network providers, application and service providers, and content providers.
- **Nondiscrimination:** Recipients shall not favor any lawful Internet applications and content over others.
- **Network Management:** As required by the NOFAs, recipients shall display any network management policies in a prominent location on the service provider's Web page and provide notice to customers of changes to these policies as well as describe any business practices or technical mechanisms they employ other than standard best efforts Internet delivery to: allocate capacity; differentiate among applications, providers, or sources; limit usage; and manage illegal or harmful content.

Exceptions to the Interconnection and Nondiscrimination Obligations

- **Existing Network Arrangements:** The nondiscrimination and interconnection requirements do not apply to the recipient's existing network arrangements. Note, however, that if a recipient contributes existing facilities to a project to satisfy the matching requirement, such facilities specifically identified as an in-kind contribution will be subject to the nondiscrimination and interconnection obligations because they become





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part of the recipient's budget and project. Further, recipients have an affirmative responsibility to connect to the public Internet even if doing so involves traversing portions of their networks that are not funded by BTOP.

- **Law Enforcement and Reasonable Network Management:** Consistent with the FCC's Internet Policy Statement, the interconnection and nondiscrimination requirements are subject to the needs of law enforcement and reasonable network management. This means that recipients may employ generally accepted technical measures to provide acceptable service levels to all customers, such as application-neutral bandwidth application and caching. NTIA will determine the reasonableness of network management techniques by consulting applicable rules and findings established by the FCC.
- **Public Safety:** For single-purpose 700 MHz public safety networks, the "needs of law enforcement and reasonable network management" exception effectively exempts 700 MHz public safety recipients from compliance with the nondiscrimination and interconnection obligations. Public safety recipients will have the ability to deploy secure private networks and prioritize traffic as they deem necessary. However, to the extent that the network is dual use, the nondiscrimination and interconnection obligations will apply to the non-public safety components of the network.
- **Managed Services:** Keeping in mind the preference for open access and the government's intent that the benefits of BTOP-funded projects should extend as far as possible, in compelling circumstances infrastructure grant recipients may offer managed services such as telemedicine, distance learning, and virtual private networks that use private network connections for enhanced quality of service rather than traversing the public Internet.

